REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

New Claims 11-15 have been introduced. Of these, Claims 11 and 12 recite that the solid polymer electrolyte membrane includes sulfonated regions and non-sulfonated regions. Basis for this can be found in paragraphs [0035]-[0037]. New Claim 13 recites that the mask includes lead. Basis for this can be found in paragraph [0031]. New Claims 14-15 recite that the mask is formed with PTFE. Basis for this can be found in paragraph [0041].

Applicant wishes to thank Examiners Martin and Chaney for the courtesy of an interview on July 21, 2004, at which time the claims and the outstanding rejections are discussed. As a result of this discussion, it was agreed that the rejection of Claims 3-5 and their dependent claims based upon Nezu et al. would be withdrawn if these claims were amended for clarification to delete the word "predetermined." The scope of the claims has not been affected thereby. Additionally, at the Examiners' suggestion Claims 1 and 2 have been amended for clarity by reciting that the anion group is combined with a solid polymer membrane "over a part of the surface of said membrane, which part is less than an entire surface of said membrane." Although no explicit agreement was reached as to these claims, the Examiners indicated that they would give further consideration to Claims 1 and 2 as so amended.

As was discussed during the interview, it was known from U.S. patent 5,994,426 (Nezu et al.) that a solid polymer electrolyte membrane could be provided with ion exchangeability for employment in a solid polymer electrolyte fuel cell by providing a membrane with sulfonic groups as anion groups (column 1, lines 43-50). It was also known that the sulfonic groups could be introduced by way of side chains using radiation graft polymerization (column 2, lines 10-20).

Nezu et al. also recognized that radiation graft polymerization could leave the membranes in a brittle state (column 3, lines 27-35). Nezu et al. recognized that attempts had been made to minimize the brittleness problem by irradiating the polymer membranes at reduced doses (column 3, lines 47-54). Nezu et al. proposed addressing this problem by using a polymer membrane having a hydrocarbon, i.e., *by modifying the composition of the underlying substrate* (column 3, line 62 – column 4, line 25).

On the other hand, there is no teaching in Nezu et al. for applying or removing a mask, or for combining an anion group with a membrane over a part of the surface of the membrane, which part is less than an entire surface of the membrane.

Additionally, there is no inherent teaching in Nezu et al. of combining an anion group with the solid polymer membrane over a part of the surface of the membrane, which part is less than an entire surface of the membrane, nor would those skilled in the art be motivated by Nezu et al. to do so. Nezu et al. describes that the sulfonic groups provide the required ion exchange for the membrane to function as a solid polymer electrolyte within a fuel cell. Providing sulfonization over less than the entirety of the membrane reduces the functional surface area of the membrane and so would not be inherent or obvious since the functionality of the membrane is thereby reduced. Moreover, the solutions taught by Nezu et al. for overcoming the problem of membrane hardening or brittleness relate to reducing the radiation dose or altering the composition of the underlying substrate; in no case does Nezu et al. disclose or suggest addressing this problem by providing an anion group over less than the entire surface of the membrane. Claims 1 and 2 (and their dependent claims), which recite that the anion group is combined with the solid polymer membrane "over a part of the surface of said membrane, which part is less than an entire surface of said membrane," therefore clearly defines over this reference.

Applicant therefore believes that the present application is in a condition for allowance and respectfully solicits an early Notice of Allowability.

Respectfully submitted,

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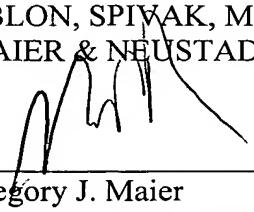
MAIER & NEUSTADT, P.C.



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